



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/086,817	02/28/2002	Jonathan T. Foote	FXPL-1031US0	1574

23910 7590 11/03/2004

FLIESLER MEYER, LLP  
FOUR EMBARCADERO CENTER  
SUITE 400  
SAN FRANCISCO, CA 94111

EXAMINER

HANEY, MATTHEW J

ART UNIT	PAPER NUMBER
----------	--------------

2613

DATE MAILED: 11/03/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/086,817

Applicant(s)

FOOTE ET AL.

Examiner

Matthew Haney

Art Unit

2613

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 10-22 is/are rejected.
- 7) ☒ Claim(s) 9 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_.

## **DETAILED ACTION**

### ***Allowable Subject Matter***

1. Claim 9 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4-8, 10-19, and 22 are rejected under 35 U.S.C. 102(b) as being anticipated by Normile (US 5,872,865).

As for claims 1, 18, and 22, Normile teaches of parameterizing the linear media source to produce a parameterized media signal (Note: the reference teaches of parameterizing with color histograms and average motion vectors, Column 6, Lines 35-41); creating a similarity array comprised of a plurality of array elements (i.e. vectors) wherein each array element includes the value of a similarity measurement between a first portion of the parameterized media signal and a second portion of the parameterized media signal (Column 6, Lines 39-54); optimizing the value of a segment fitness function over the similarity array in order to find an optimal segment wherein the segment fitness function is adapted to measure the similarity between a segment of the

Art Unit: 2613

parameterized media signal and the entire parameterized media signal and is a mathematical function of at least a location of the segment (Note: two different video sequences are taken and the dot product is done to get the similarity between them using the parameterized values, Column 7, Lines 16-26); selecting a portion of the linear media source as the optimal summary, the portion of the linear media source corresponding to the optimal segment (Note: Column 7 teaches that the high energy (i.e. optimal) eigen vector is determine and any unnecessary frames (i.e. less optimal) are removed, Column 7, Lines 27-44, along with Column 9, Lines 16-20).

As for claim 2, Normile teaches of separating the linear media source into a set of media frames (Column 9, Lines 16-20); applying a parameterization to each media frame in order to produce a feature vector representing each media frame and aggregating the feature vectors in order to produce the parameterized media signal (Column 7, Lines 16-26).

As for claim 4, Normile teaches of parameterization includes assigning a token value to a portion of the media frame (Note: the reference teaches of getting an average value that will represent the value for an entire video sequence (Column 6, Lines 33-39).

As for claim 5, Normile teaches of reading a linear media data file containing the linear media source divided into a plurality of media frames (Column 4, Lines 48-67 and Column 5, Lines 1-17), each media frame containing parameterized linear media information, creating a feature vector for each media frame from the parameterized

linear media information contained in each frame, aggregating the feature vectors in order to produce the parameterized media signal (Column 7, Lines 16-26).

As for claim 6, Normile teaches of the similarity measurement comprises a measurement of vector similarity between a first feature vector corresponding to the first portion of the parameterized media signal and a second feature vector corresponding to the second portion of parameterized media signal (Column 7, Lines 15-42).

As for claim 7, Normile teaches of the measurement of vector similarity comprises the Euclidean distance between feature vectors in parameter space (Note: the reference teaches of getting the distance between vectors in order to find their "closeness" (i.e. similarity), Column 8, Lines 7-28).

As for claim 8, Normile teaches of the measurement of vector similarity includes the scalar (dot) product of the feature vectors (Column 7, Lines 21-25).

As for claim 10, Normile teaches of the measurement of vector similarity includes applying a Term-Frequency/Inverse Document Frequency weighting to the feature vectors (Column 9, Lines 59-67 and Column 10, Lines 1-24).

As for claim 11, Normile teaches of the similarity measurement comprises a vector correlation of a first plurality of feature vectors corresponding to the first portion of the parameterized media signal and a second plurality of feature vectors corresponding to the second portion of the parameterized media signal (Column 7, Lines 16-44).

As for claim 12, Normile teaches of the similarity array comprises a two dimensional matrix with each row and each column of the matrix corresponding to a portion of the parameterized media signal, such that each matrix element includes the

Art Unit: 2613

value of a similarity measurement between a first feature vector, the first feature vector corresponding to the portion of the parameterized media signal associated with the row of the matrix element, and a second feature vector, the second feature vector corresponding to the portion of the parameterized media signal associated with the column of the matrix element (Column 7, Lines 4-15).

As for claim 13, Normile teaches of the segment measurement of a portion of the similarity array, the portion of the fitness function comprises the average similarity array, the portion of the similarity array containing a plurality of similarity measurements between a candidate segment and the entire parameterized media signal (Note: the difference is taken between the attribute vector and all the vectors in the video sequence, Column 8, Lines 7-28).

As for claim 14, Normile teaches of the segment fitness function further comprises a weighting function which emphasizes the similarity measurement for at least one portion of the parameterized media signal corresponding to a desirable portion of the linear media source (Column 9, Lines 55-67).

As for claim 15-17, Normile teaches of optimizing the value of a segment fitness function using a one-dimensional optimization to find an optimal segment location for a segment of a predetermined length, optimizing the value of a segment fitness function using a one-dimensional optimization to find an optimal segment length for a segment of a predetermined location, optimizing the value of a dimensional optimization segment fitness function using a two-dimensional optimization to find an optimal segment location and an optimal segment length (Note: the reference is classifying segments of

Art Unit: 2613

video so therefore, the reference explains that it not only finds the optimal length (i.e. drops out repeated or redundant frames) but it also finds the optimal location (i.e. different locations might require different classifications if not similar to another, Column 9, Lines 4-34).

As for claim 19, Normile teaches of linear media source including video (Column 4, Lines 57-63).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Normile (US 5,872,865).

As for claims 20 and 21, Normile does not explicitly teach of linear media source including audio and text information, however, it is considered obvious to one of ordinary skill in the art at the time of the invention that audio and text information could be substituted for video because of the similarities between their formats, and information contained therein.

5. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Normile in view of Mauldin (US 5,664,227). Normile does not teach of parameterization of a media

Art Unit: 2613

frame includes a frequency domain transform (i.e. dct), however, Mauldin does (Note the reference teaches that dct can be used to find similarities between keyframes, Column 5, Lines 30-59). It would have been obvious to one of ordinary skill in the art at the time of the invention to use frequency domain transform because it gives the capability to do fast detection and is normally already present in the encoder for linear media conversion.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew Haney whose telephone number is 703-305-4915. The examiner can normally be reached on M-Th (7-4:30), Every Other Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Kelley can be reached on 703-305-4856. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

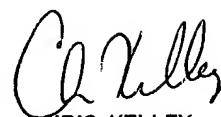


Application/Control Number: 10/086,817  
Art Unit: 2613

Page 8

Examiner  
Art Unit 2613

mjh

A handwritten signature in black ink, appearing to read "C. Kelley".

CHRIS KELLEY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600